

## PATENT ABSTRACTS OF JAPAN

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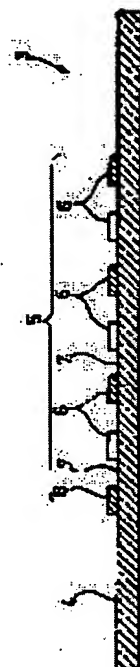
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## (54) COLORIMETRIC GAGE AND ITS USING METHOD

## (57)Abstract:

PROBLEM TO BE SOLVED: To easily and conveniently observe the color having a reduced density by forming a colorimetric part having printed dots of a white ink on a transparent sheet with the dot area ratio being within a specified range.

SOLUTION: The colorimetric gage 3 has a colorimetric part 5 having printed dots of a white ink 6 on one surface center of a colorless transparent sheet 4 to the visible light which is made of an inorg. material e.g. glass, etc., or synthetic resin. The colorimetric part 5 is printed so that the dot area ratio is within a range of 10-90%. The colorimetric gage 3 is laid on a color sample and the color sample is observed in a specified range/angle through the colorimetric part 5. The dots of the white ink 6 uniformly shade the color of the color sample, the color of the white ink is mixed with the color of the color sample, as seen through transparent parts 7, and hence the condition that the color density of the color sample is reduced, the same as in the stipple method, can be observed.



## LEGAL STATUS

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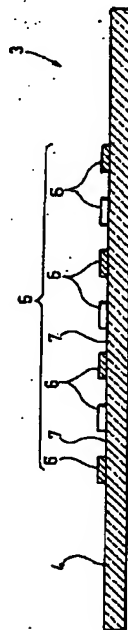
Fターム(参考) 2G020 AA04 AA08 DA05 DA16 DA52

(54) 【発明の名称】 比色ゲージおよびその使用方法

(57) 【要約】

【課題】 濃い色の色見本に重ねて観察することにより濃度を減じた色を容易かつ簡便に観察することができる比色ゲージを提供する。

【解決手段】 透明シート4上に白インキ6を網点状に印刷し、網点面積率が10%~90%となるように白インキ6と透明部7からなる比色部5を設ける。



## 【特許請求の範囲】

【請求項1】可視光の下で無色な透明シートに白インキを網点状に印刷してなる比色部を有し、該比色部は網点面積率が10%～90%の範囲内に形成してなる比色ゲージ。

【請求項2】前記比色部は網点面積率の値が段階的に異なるものを複数個設けてなる請求項1に記載の比色ゲージ。

【請求項3】前記比色部には保護層を設けてなる請求項1または2に記載の比色ゲージ。

【請求項4】濃い色の色見本の上に、可視光の下で無色な透明シートに白色インキを網点状で、かつ、網点面積率の値が10%～90%内となるように印刷してなる比色部を有する比色ゲージを重ね、該比色部を介して前記色見本を所定範囲内の距離・角度をおいて観察することとを特徴とする比色ゲージの使用法。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】本発明はカラー印刷に用いる色インキなどの色見本を用いる際に用いて好適な比色ゲージに関し、特に濃い色の色見本と共に用いることにより、薄い色の色見本と同じ色を再現できるようにした比色ゲージに関する。

## 【0002】

【従来の技術】今日、色を用いた工業製品の取り引きには頻繁に色見本が用いられている。たとえば、イラストやポスターなどのカラー印刷を例に挙げると、発注者・デザイナー・印刷業者・製版技術者の間で互いに設計の色と印刷仕上がりの色を確認するのが困難である。このため、インキメーカーでは基準となる色インキをベタ印刷して記号で分類し、切り離し容易に綴じあわせた図1中の1に示すような色見本帳(カラーガイド)を作って販売している。そして、発注者が製版者などに図柄2の色を指定する際には、色見本帳1から記号入りの色見本の小片1Aを切り離して原稿に添付するようにすれば指定の色を間違いなく使うことができる(図2参照)。

## 【0003】

【発明が解決しようとする課題】ところで、色見本はメーカーが製造する数多くの色違いの製品の見本であるから膨大な数となり、同じ色で濃度が違うだけの見本は省略される傾向がある。前述のカラー印刷の場合では、インキメーカーが提供する色見本は最も濃い色で印刷されたものが主で、同じ色の濃淡を変えて印刷した色見本はほとんどなかった。このため、同じ色でも濃度違いの色を見るには網点印刷で網点の大きさを変えたものを何度も校正刷りに出す必要があり、少ない色数で濃淡差を用いた図柄の場合はほとんど同じ色見本・記号で色指定することとなるから、色の濃さにより印象が異なる場合は色指定の作業が煩雑になるという問題があった。本発明は上述した従来技術の問題に鑑みなされたもので、本発明

の目的は濃い色の色見本に重ねて観察することにより濃度を減じた色を容易かつ簡便に観察することができる比色ゲージを提供することにある。

## 【0004】

【課題を解決するための手段】上記課題を解決する為、本発明によれば、可視光の下で無色な透明シートに白インキを網点状に印刷してなる比色部を設け、該比色部は網点面積率の値が10%～90%内に形成してなる比色ゲージが提供される。

10 【0005】ここで、前記比色部は網点面積率の値が段階的に異なるものを複数個設けるのが好ましい。

【0006】また、前記比色部には保護層を設けるのが好ましい。

【0007】さらに、本発明によれば、濃い色の色見本の上に、可視光の下で無色な透明シートに白色インキを網点状で、かつ、網点面積率の値が10%～90%の範囲内となるように印刷してなる比色部を有する比色ゲージを重ね、該比色部を介して前記色見本を所定範囲内の距離・角度をおいて観察することとを特徴とする比色ゲージの使用法も提供される。

## 【0008】

【作用】上記構成からなる比色ゲージの比色部を色の濃い色見本に重ね、ある程度離れて上から覗けば、色見本の色が網点の白インキ部分により均等に遮られ、白インキの色と透明部分を通過し通して見た色見本の色が混じり合い、点描法と同じ様に、色見本の色が薄められた状態を観察できる。

## 【0009】

【発明の実施の形態】以下に、本発明の実施の形態を図3ないし図9を用いて説明する。まず、図3、図4中の3は本発明第1の実施形態の比色ゲージを示し、該比色ゲージ3は可視光線の下で無色透明な、例えばガラスなどの無機材料やPET等の合成樹脂製の透明シート4の片面中央に、後述する白インキ6を網点状に印刷した比色部5が形成されている。

【0010】6は前記比色部5を形成する白インキであり、該白インキ6は熱乾燥、熱重合、光硬化などの手法で硬化する樹脂ワニスに酸化チタン等の白色顔料を加えた公知慣用のものが使用できるが、硬化後の白さが使用する色見本の地の紙の色に近いものが好ましく、乾燥(硬化)後の表面が光沢となるものよりも艶消しとなるものが好ましい。そして、該白インキ6はオフセット印刷やスクリーン印刷の技術を用いて網点状に、前記透明シート4上に印刷されている。

【0011】7は前記比色部5のうちで白インキ6の付着していない透明部を示し、比色部5は該透明部7を介して前記透明シート4の厚さ方向に一部透けて見えるようになっている。ここで、前記比色部5の中で白インキ6の付着部分の面積(網点面積率)は透明部7の10%～90%の範囲内とする必要がある。10%以下では色見

本の色の濃さを抑える効果が低く、また、透明シート4自体の表面光沢等により色見本の見え方が異なってくるし、90%以上では透明部7がほとんどなく、白インキ6の色を見ているのと相違なくなり、いずれも本発明の目的を達成し得ないからである。

【0012】網点面積率のより好ましい値は20%~80%の範囲で、この範囲内であれば色見本そのままの色を100%とした値から網点面積率の数値を差し引くことにより、濃度をその数値だけ減じたのと等しい色が再現されるようになる。

【0013】また、本実施形態の図面には図示されないが、透明シート4、比色部5、あるいは比色ゲージ3の箱、包装、取扱説明書などの何処かに比色部5の網点面積率を明記しておくのが好ましい。

【0014】本実施形態による比色ゲージ3は以上のごとく構成を有するもので、次にその使用方法について説明する。

【0015】比色ゲージ3を濃い色見本(図示せず)の上に、比色部5がかかるように重ねて置く。そして、観察者は比色部5の網点のはっきりとは見えない位の距離をおき、透明シート4の平面に垂直に近い角度から比色部5の下の色見本を観察する。

【0016】網点のはっきりとは見えない位の距離をおくことにより、色見本の色が網点の白インキ6部分で遮られ、白インキ6の色と透明部7を通過し通して見た色見本の色が混じり合い、点描法と同じ様に、色見本の色が濃度が薄められた状態を観察することができる。ここで、「網点のはっきりとは見えない位の距離」とは観察者の視力により区々であるが、概ね30cm以上である。

【0017】なるべく垂直に近い角度とするのは、あまりに浅い角度だと透明シート4の表面で全反射が起こり、透明シート4の表面に景色が反射して見えるだけで比色部5の下の色見本が見られなくなるからである。「なるべく垂直に近い角度」とは透明シート4の材質や表面状態にも依るが概ね30度以上である。

【0018】以上のような用い方により、観察者は1つの濃い色の色見本から2段階の濃度の異なる色見本を持つのと同等効果が得られる。

【0019】次に図5ないし図7を用いて第2の実施形態について説明するが、以後、前述した第1の実施形態と同一の構成要素には同一符号を付し、その説明を省略する。

【0020】図中、8は比色ゲージを示し、該比色ゲージ8には前述した第1の実施形態の比色ゲージ3とほぼ同様に、透明シート4上に白インキ6を網点状に印刷した比色部9、10、11、12が設けられている。

【0021】然るに、本実施形態の特徴は比色部9~12として網点面積率の値が20%~80%の間で、20%刻みで段階的に異なるものを4個設けたことにある。

【0022】ここで、網点面積率の低い(20%)比色部

9は図6に示す如く、白インキ6の面積が狭く、透明部7の面積が広く形成され、一方、網点面積率の高い(80%)比色部12は図7に示す如く、白インキ6の面積が広く透明部7の面積が狭く形成されている。

【0023】そして、各比色部9~12の角隅には該各比色部の網点面積率が目盛り13として表示され、基本となる色見本に対して濃度を何%マイナスした色を表示できるのかが一目でわかるようになっている。

【0024】かくして、本実施形態によれば、色の濃い色見本一つと組み合わせることにより、元の色見本のマイナス80%からマイナス0%まで、20%毎の5段階で色の濃度が異なる色見本を持つのと同等効果を奏する。

【0025】次に、図8および図9は第3の実施形態による比色ゲージ14を示し、該比色ゲージ14も前述した第2の実施形態の比色ゲージ8と同様、透明シート4上に白インキ6と透明部7からなる比色部を有し、該比色部は網点面積率の値を段階的に変化させたものを複数個設けている(図示せず)。

【0026】然るに、本比色ゲージ14には白インキ6の印刷面側に比色部を覆う保護層15が設けられている。この保護層15は透明シート4と同様可視光の下で無色透明であり、摩耗しにくくて傷、汚れの付きにくい材質から形成されるのが好ましく、透明シート4上の比色部に液状物質をコーティングしたのちに乾燥・硬化して形成しても良いし、予めシート状に形成した部材を透明シート4上に貼り合わせて形成してもよい。

【0027】以上の如く構成される本実施形態によれば、比色部の白インキ6の塗膜が使用による摩耗で剥がれたり、傷ついて薄くなり色見本の色が透過するようになったり、あるいは白インキ6の表面が汚れて着色するのを防止でき、耐久性を高めることができる。ここで、図8では保護層15を比色部の白インキ6の付着面側にのみ設ける場合を例示したが本実施形態はこれに限るものではなく、図9に示すように透明シート4の両面に設けても良い。

【0028】以上、本発明を実施形態1~3を用いて詳述したが、本発明はこれらの実施形態に限定されるものではなく、特許請求の範囲内で組み替えた構成をとる事が可能である。

【0029】例えば、各比色ゲージは幅広な下敷き板状のものを図示したが小型なカード状としてもよく、図1に図示した色見本(カラーガイド)と一緒にとじ合わせて一体化させても良い。

【0030】また、第2の実施形態では1枚の透明シート4上に複数の比色部9~12を形成するものとして述べたが、一枚の透明シート上に一つの比色部を設けたものを複数組にして用いても良い。

【0031】

【発明の効果】以上詳述したとおり、本発明の比色ゲージをもっとも濃い色の色見本と共に用いるだけで、薄い

色の色見本を用意しなくても、網点印刷で網点の大きさを変えたものを何度も校正刷りに出さなくても容易に色指定・色確認ができる。

【図面の簡単な説明】

【図1】従来用いられているカラーインクの色見本(帳)を示す説明図である。

【図2】色見本を用いて図柄の色指定を行う方法を示す説明図である。

【図3】本発明の第1の実施の形態による比色ゲージを示す平面図である。

【図4】図3中の矢示IV-IV方向の拡大断面図である。

【図5】本発明の第2の実施の形態による比色ゲージを示す平面図である。

【図6】図5中の矢示VI-VI方向の拡大断面図である。

【図7】図5中の矢示VII-VII方向の拡大断面図であ \*

＊る。

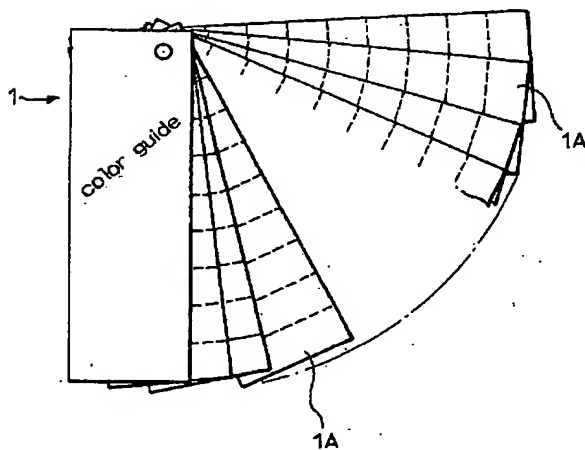
【図8】本発明の第3の実施の形態による比色ゲージを示す拡大断面図である。

【図9】同上、第3の実施の形態の変形例である。

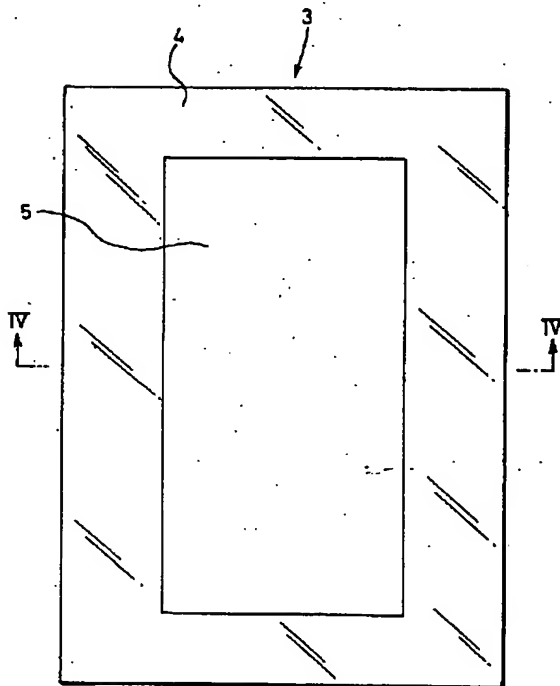
【符号の説明】

- 1 色見本
- 1A 色見本の小片
- 2 図柄
- 3、8、14 比色ゲージ
- 10 4 透明シート
- 5、9、10、11、12 比色部
- 6 白インキ
- 7 透明部
- 13 目盛り
- 15 保護層

【図1】

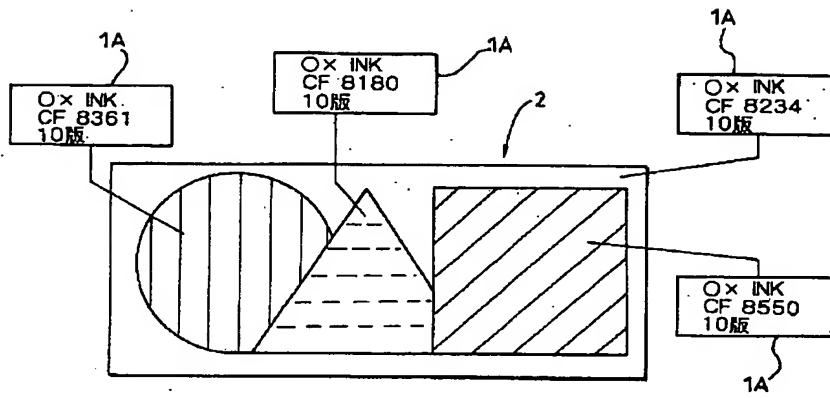


【図3】

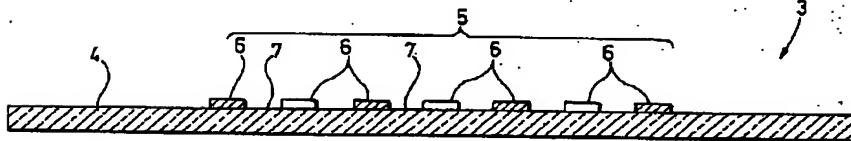


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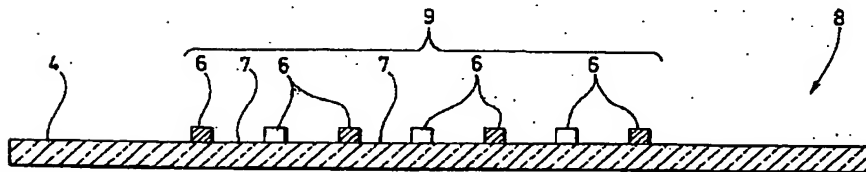
【図2】



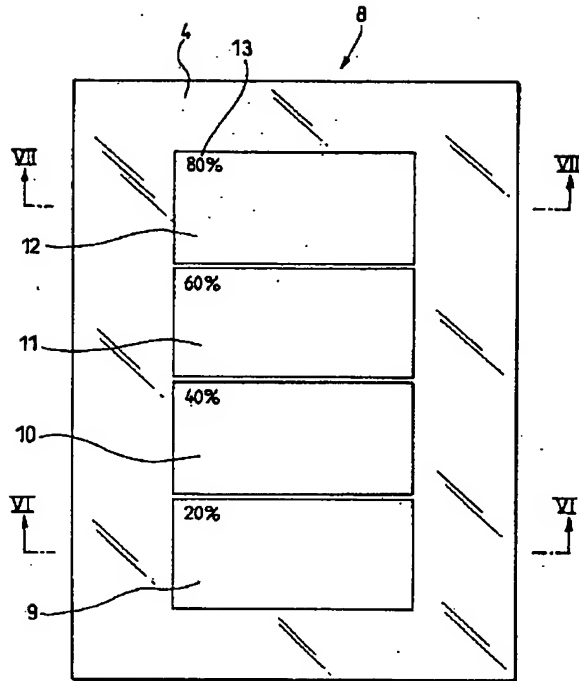
【図4】



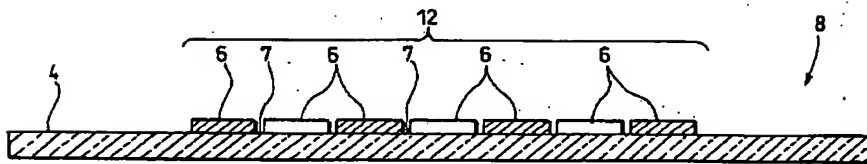
【図6】



【図5】

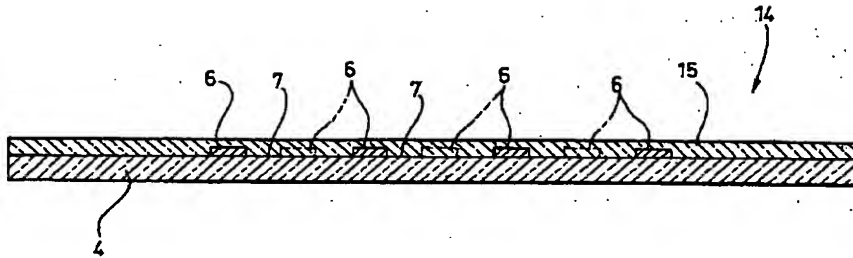


【図7】

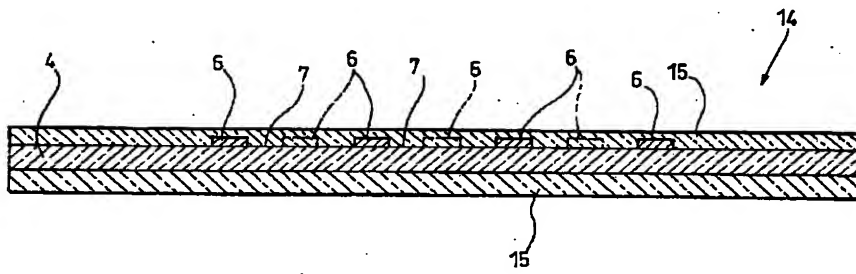


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【図8】



【図9】



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CLAIMS

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[Claim(s)]

[Claim 1] This colorimetry section is a colorimetry gage which it comes to form in within the limits whose rate of halftone dot area it has the colorimetry section which comes to print white ink in the shape of a halftone dot on a colorlessness transparence sheet under the light, and is 10% - 90%.

[Claim 2] Said colorimetry section is a colorimetry gage according to claim 1 which comes to prepare two or more things from which the value of the rate of halftone dot area differs gradually.

[Claim 3] The colorimetry gage according to claim 1 or 2 which comes to prepare a protective layer in said colorimetry section.

[Claim 4] Operation of the colorimetry gage characterized by piling up the colorimetry gage which have the colorimetry section which print and become a transparence sheet [ colorlessness / under the light ] about white ink so that it may be a halftone dot-like and the value of the rate of halftone dot area may become in 10% - 90%, setting said color sample and observing the distance and the include angle of predetermined within the limits through this colorimetry section on the deep color sample of a color.

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DETAILED DESCRIPTION

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## [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the colorimetry gage which enabled it to reproduce the same color as the color sample of a thin color by using, in case color samples, such as color ink used for color printing, are used, and using with the color sample of a deep color especially about a suitable colorimetry gage.

[0002]

[Description of the Prior Art] The color sample is frequently used for dealings of the industrial product using a color today. For example, if color printing of an illustration, a poster, etc. is mentioned as an example, it is difficult to check the color of a design, and the color of a printing result mutually between a purchaser, a designer, a printer, and a platemaking engineer. For this reason, solid printing of the color ink which serves as criteria by the ink manufacturer is carried out, it classifies according to a notation, and separates, and the color sample collection (color guide) as shown in one in drawing 1 which filed easily and was united is made and sold. And in case a purchaser specifies the color of a pattern 2 as an engraver etc., if wafer 1A of the color sample containing a notation is separated from the color sample collection 1 and it is made to attach to a manuscript, the appointed color can be used rightly (refer to drawing 2).

[0003]

[Problem(s) to be Solved by the Invention] By the way, since a color sample is a sample of many different colors products which a manufacturer manufactures, it serves as a huge number, and only the sample with which concentration is different in the same color tends to be omitted. As for the color sample which an ink manufacturer offers in the case of above-mentioned color printing, what was printed in the deepest color was main, and there was almost no color sample which changed and printed the shade of the same color. For this reason, what changed the magnitude of a halftone dot into seeing the color of a concentration difference by halftone dot printing needed to be repeatedly taken out also with the same color to the proof, and with the small color number, in the case of the pattern using a shade difference, since color specification would be carried out with the almost same color sample and notation, when an impression changed with thickness of a color, there was a problem that the activity of color specification became complicated. This invention was made in view of the problem of the conventional technique mentioned above, and it is in the object of this invention offering the colorimetry gage which can observe the color which reduced concentration by observing in piles to the color sample of a deep color easily and simple.

[0004]

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, according to this invention, the colorimetry section which comes to print white ink in the shape of a halftone dot on a colorlessness transparency sheet under the light is prepared, and the colorimetry gage with which the value of the rate of halftone dot area comes to form this colorimetry section in 10% - 90% is offered.

[0005] Here, as for said colorimetry section, it is desirable to prepare two or more things from which the value of the rate of halftone dot area differs gradually.

[0006] Moreover, it is desirable to prepare a protective layer in said colorimetry section.

[0007] According to this invention, under the light white ink on a colorlessness transparency sheet on the deep color sample of a color furthermore, by the shape of a halftone dot And the colorimetry gage which has the colorimetry section which prints and becomes is piled up so that the value of the rate of halftone dot area may become within the limits which is 10% - 90%, and the operation of the colorimetry gage characterized by setting said color sample and observing the distance and the include angle of predetermined within the limits through this colorimetry section is also offered.

[0008]

[Function] If the colorimetry section of the colorimetry gage which consists of the above-mentioned configuration is put on a color sample with a deep color, it separates to some extent and it shows from a top, the color of a color sample is uniformly interrupted by the white ink part of a halftone dot, the color of the color sample which kept passing and looked at the color and transparency part of white ink is mixed, and the condition that the concentration of the color of a color sample was thinned can be observed like the sketching method.

[0009]

[Embodiment of the Invention] Below, the gestalt of operation of this invention is explained using drawing 3 R> 3 thru/or drawing 9. First, drawing 3 and 3 in drawing 4 show the colorimetry gage of the operation gestalt of this invention 1st, and the colorimetry section 5 which printed the white ink 6 later mentioned transparently and colorlessly [ this colorimetry gage 3 ] under a visible ray in the center of one side of the transparency sheet 4 made of synthetic resin, such as inorganic materials, such as glass, and PET, in the shape of a halftone dot is formed.

[0010] Although 6 is white ink which forms said colorimetry section 5 and this white ink 6 can use the thing of the well-known common use which added white pigments, such as titanium oxide, to the resin varnish hardened by technique, such as heat desiccation, thermal polymerization, and photo-curing, the thing near the color of the paper of the ground of the color sample which the whiteness after hardening uses is desirable, and what becomes more nearly lusterless than that from which the front face after desiccation (hardening) serves as gloss is desirable. And this white ink 6 is printed on said transparency sheet 4 in the shape of a halftone dot using the technique of offset printing or screen-stencil.

[0011] 7 shows the area pellucida to which white ink 6 has not adhered among said colorimetry sections 5, and through this area pellucida 7, the colorimetry section 5 is transparent in the thickness direction of said transparency sheet 4 in part, and visible to it. Here, it is necessary to make area (rate of halftone dot area) of the adhesion part of white ink 6 into within the limits of 10% - 90% of

the area pellucida 7 in said colorimetry section 5. It is because how to which the effectiveness of stopping the thickness of the color of a color sample is low, and is visible with the surface gloss of transparence sheet 4 the very thing etc. differs, and there is almost no area pellucida 7 at 90% or more, it becomes indifferent from seeing the color of white ink 6 and all cannot attain the object of this invention at 10% or less. [ of a color sample ]

[0012] if the more desirable value of the rate of halftone dot area is 20% - 80% of range and it is this within the limits -- a color sample -- a color equal to only that numeric value having reduced concentration comes to be reproduced by deducting the numeric value of the rate of halftone dot area from the value which made the color as it is 100%.

[0013] Moreover, although not illustrated by the drawing of this operation gestalt, it is desirable to specify the rate of halftone dot area of the colorimetry section 5 in somewhere, such as a box of the transparence sheet 4, the colorimetry section 5, or the colorimetry gage 3, a package, and an operation manual.

[0014] More than unties the colorimetry gage 3 by this operation gestalt, it has a configuration, and explains the operation below.

[0015] On a deep color sample (not shown), the colorimetry gage 3 is placed in piles so that the colorimetry section 5 may start. And an observer keeps distance to the extent that the halftone dot of the colorimetry section 5 is not in sight clearly, and observes the color sample under the colorimetry section 5 from the include angle vertically near the flat surface of the transparence sheet 4.

[0016] The color of a color sample can be interrupted by Lycium chinense in white ink 6 part of a halftone dot in distance to the extent that a halftone dot is not in sight clearly, the color of the color sample which kept passing and looked at the color and area pellucida 7 of white ink 6 can be mixed, and the condition that the concentration of the color of a color sample was thinned can be observed like the sketching method. Here, although "distance to the extent that a halftone dot is not in sight clearly" is various by an observer's eyesight, it is 30cm or more in general.

[0017] If it is the too much shallow include angle which is considered as an include angle near as vertically as possible, total reflection will happen on the front face of the transparence sheet 4, the color sample under the colorimetry section 5 can be seen only by a scene reflecting and being visible to the front face of the transparence sheet 4, and it is because \*\*\*\* becomes there is not less. Although "an include angle near as vertically as possible" depends also on the construction material and the surface state of the transparence sheet 4, it is 30 degrees or more in general.

[0018] The same effectiveness is acquired as an observer has the color sample with which two steps of concentration differs from the color sample of one deep color depending on the above ways of using.

[0019] Next, although the 2nd operation gestalt is explained using drawing 5 thru/or drawing 7, henceforth, the same sign is given to the same component as the 1st operation gestalt mentioned above, and the explanation is omitted.

[0020] Among drawing, eight show a colorimetry gage and the colorimetry sections 9, 10, 11, and 12 which printed white ink 6 in the shape of a halftone dot are formed on the transparence sheet 4 almost like the colorimetry gage 3 of the 1st operation gestalt mentioned above at this colorimetry gage 8.

[0021] it is in having prepared four things which it is alike, the description of this operation gestalt is minced 20%, and comes out while [ appropriate ] the value of the rate of halftone dot area is 20% - 80% as the colorimetry sections 9-12, and are gradually different.

[0022] Here, the colorimetry section 9 with the low (20%) rate of halftone dot area has a narrow area of white ink 6, as shown in drawing 6, the area of the area pellucida 7 is formed widely, on the other hand, as the colorimetry section 12 with the high (80%) rate of halftone dot area is shown in drawing 7, the area of white ink 6 is large and the area of the area pellucida 7 is formed narrowly.

[0023] And it is turned out whether the rate of halftone dot area of each of this colorimetry section is displayed as a graduation 13, and the square corner of each colorimetry sections 9-12 can display the color which subtracted concentration what% to the basic color sample at a glance.

[0024] In this way, according to this operation gestalt, the same effectiveness as having the color sample with which the concentration of a color differs in five steps for every 20% from minus 80% to minus 0% of the original color sample is done so by combining with one color sample with a deep color.

[0025] Next, drawing 8 and drawing 9 showed the colorimetry gage 14 by the 3rd operation gestalt, like the colorimetry gage 8 of the 2nd operation gestalt which also mentioned this colorimetry gage 14 above, on the transparence sheet 4, it had the colorimetry section which consists of white ink 6 and area pellucida 7, and this colorimetry section has prepared two or more things to which the value of the rate of halftone dot area was changed gradually (not shown).

[0026] being appropriate -- it is alike and the colorimetry section is prepared in the wrap protective layer 15 by this colorimetry gage 14 at the printing side side of white ink 6. It is transparent and colorless under the light like the transparence sheet 4, and as for this protective layer 15, it is desirable to be formed from the construction material which it is hard to wear out and cannot be easily stained with a blemish and dirt, and on the transparence sheet 4, it sticks the member beforehand formed in the shape of a sheet, and may form [ after coating the colorimetry section on the transparence sheet 4 with the liquefied matter, it may dry and harden and you may form, and ] it.

[0027] According to this operation gestalt constituted like the above, the color of a color sample can penetrate now, or it can prevent [ \*\*\*\* / that the paint film of the white ink 6 of the colorimetry section separates in wear by activity ] getting damaged, becoming thin, and the front face of white ink 6 becoming dirty, and coloring, and endurance can be raised. Here, in drawing 8, although the case where a protective layer 15 was formed only in the adhesion side side of the white ink 6 of the colorimetry section was illustrated, this operation gestalt may not be restricted to this, and as shown in drawing 9, it may be prepared in both sides of the transparence sheet 4.

[0028] as mentioned above, the thing by which this invention is limited to these operation gestalten although this invention was explained in full detail using the operation gestalten 1-3 -- it is not -- a claim -- it is possible to take the configuration rearranged inside.

[0029] For example, each colorimetry gage is closed together with [ although the broad underlay tabular thing was illustrated, it is good also as the shape of a small card, and ] the color sample (color guide) illustrated to drawing 1, and may be made to unify.

[0030] Moreover, although the 2nd operation gestalt described as what forms two or more colorimetry sections 9-12 on the transparence sheet 4 of one sheet, you may use by making into two or more sets what prepared the one colorimetry section on the transparence sheet of one sheet.

[0031]

[Effect of the Invention] Even if it does not take out repeatedly to a proof what changed the magnitude of a halftone dot by halftone dot printing even if it did not prepare the color sample of a thin color only with using the colorimetry gage of this invention with the color sample of the deepest color, color specification and a color check can be easily performed, as explained in full detail above.

[Translation done.]

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DESCRIPTION OF DRAWINGS

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## [Brief Description of the Drawings]

[Drawing 1] It is the explanatory view showing the color sample (curtain) of the color ink used conventionally.

[Drawing 2] It is the explanatory view showing how to perform color specification of a pattern using a color sample.

[Drawing 3] It is the top view showing the colorimetry gage by the gestalt of operation of the 1st of this invention.

[Drawing 4] It is the expanded sectional view of the direction of \*\*\*\* IV-IV in drawing 3.

[Drawing 5] It is the top view showing the colorimetry gage by the gestalt of operation of the 2nd of this invention.

[Drawing 6] It is the expanded sectional view of the direction of \*\*\*\* VI-VI in drawing 5.

[Drawing 7] It is the expanded sectional view of the direction of \*\*\*\* VII-VII in drawing 5.

[Drawing 8] It is the expanded sectional view showing the colorimetry gage by the gestalt of operation of the 3rd of this invention.

[Drawing 9] It is the modification of the gestalt of the same as the above and the 3rd operation.

## [Description of Notations]

1 Color Sample

1A The wafer of a color sample

2 Pattern

3, 8, 14 Colorimetry gage

4 Transparence Sheet

5, 9, 10, 11, 12 Colorimetry section

6 White Ink

7 Area Pellucida

13 Graduation

15 Protective Layer

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[Translation done.]

## \* NOTICES \*

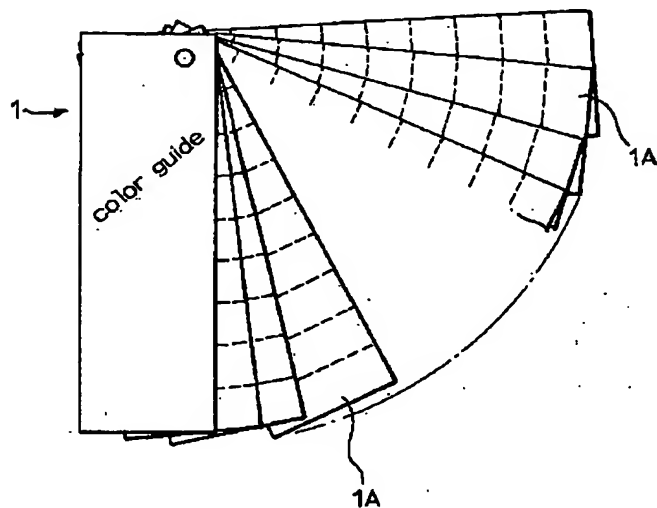
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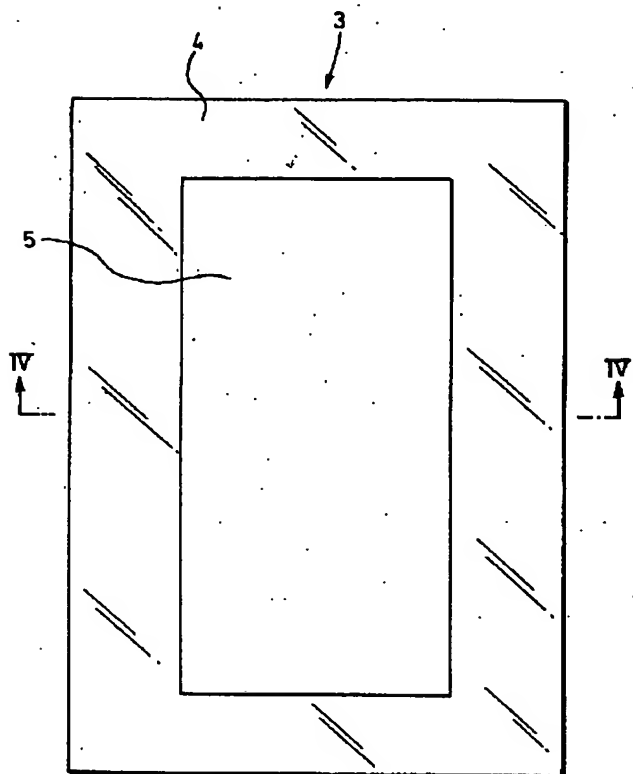
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DRAWINGS

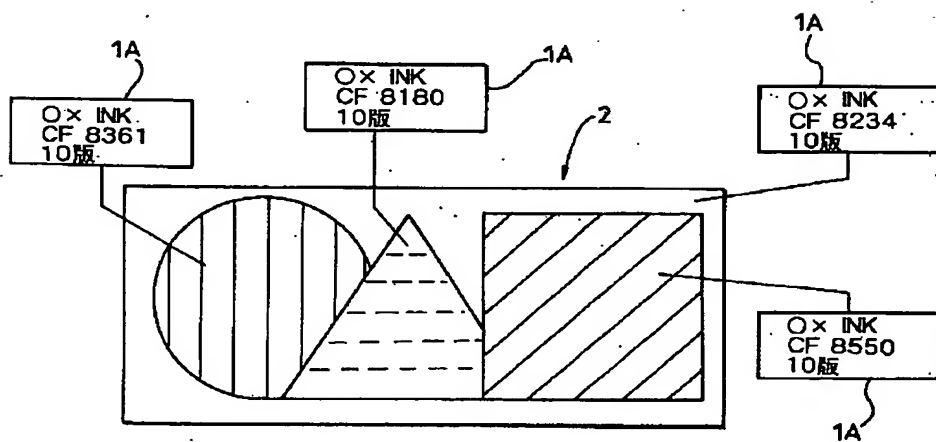
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[Drawing 1][Drawing 3]

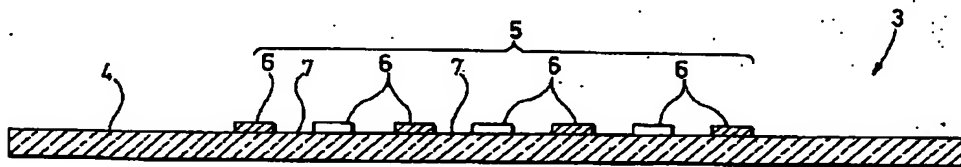
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[Drawing 2]

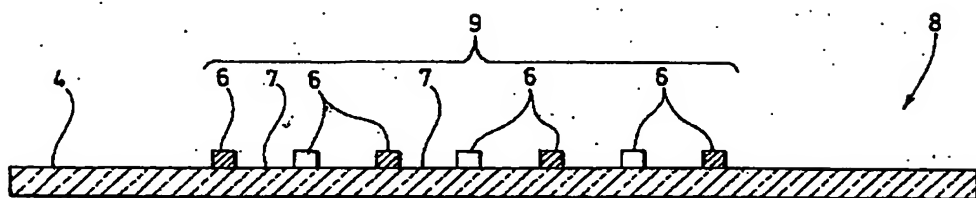


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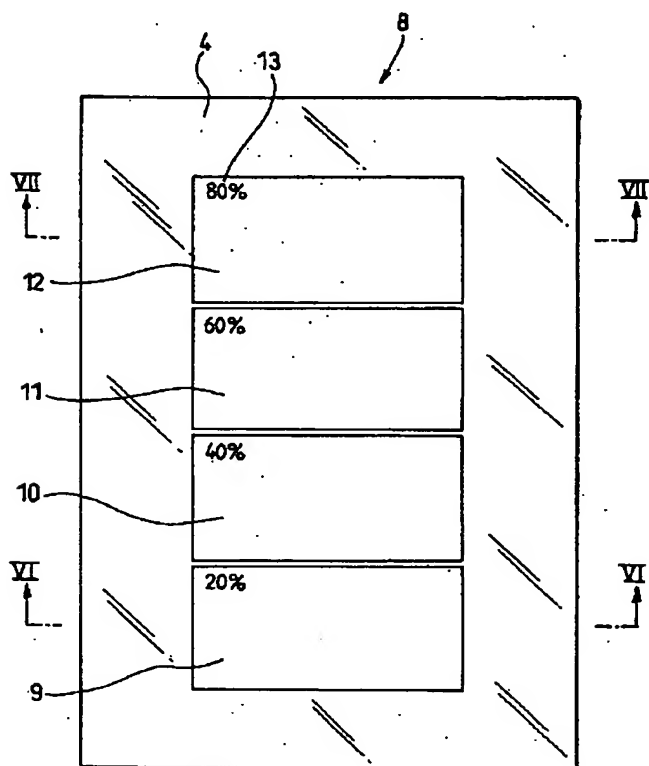


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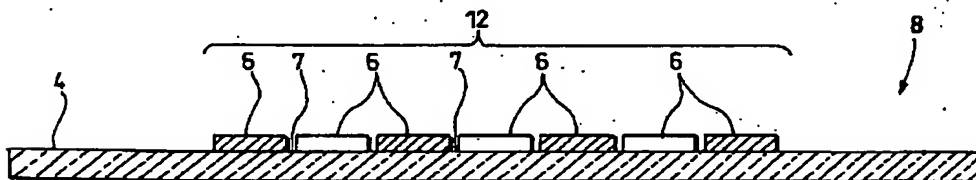
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[Drawing 5]



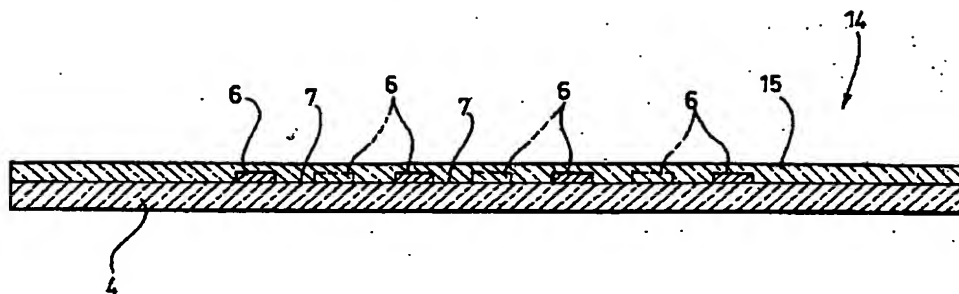
[Drawing 7]



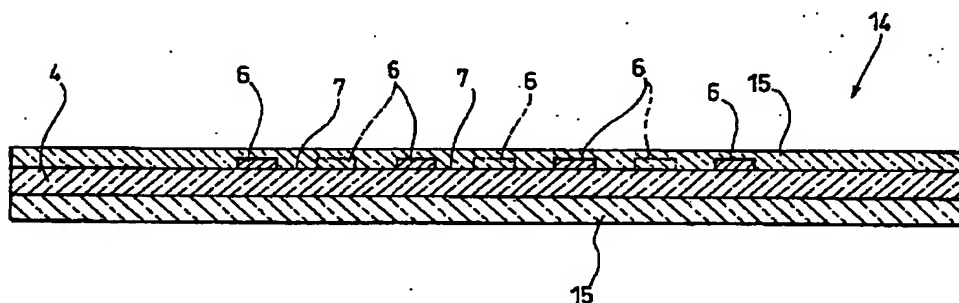
[Drawing 8]

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[Drawing 9]



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